CLAIMS:

1. An electric device (100) having:

a resistor comprising a layer (7, 107) of a phase change material being changeable between a first phase with a first electrical resistivity and a second phase with a second electrical resistivity different from the first electrical resistivity, the phase change material being a fast growth material, the resistor being switchable between at least three different electrical resistance values by changing a corresponding portion of the layer (7, 107) of the phase change material from the first phase to the second phase.

2. An electric device (100) as claimed in claim 1, further comprising means (400) for switching the resistor between the at least three different electrical resistance values.

3. An electric device (100) as claimed in claim 1, wherein the portion of the layer (7, 107) of phase change material is in direct contact with a further resistor (6, 106) arranged in parallel with the resistor.

4. An electric device (100) as claimed in Claim 3, wherein the further resistor (6, 106) has a further electrical resistance which is smaller than the largest of the at least three different electrical resistance values.

5. An electric device (100) as claimed in Claim 4, further comprising a read out signal generator for providing an electric read signal having a read voltage (V) to the resistor and a read out circuit for determining the resistance value from the electric read signal, the read out circuit requiring a minimum current (I), the further resistance (R_{fr}) being smaller than the read voltage (V) divided by the minimum current (I), ($R_{fr}<V/I$).

6. An electric device (100) as claimed in Claim 4, further comprising a read out signal generator for providing an electric read signal having a read current (I) to the resistor and a read out circuit for determining the resistance value from the electric read signal, the

read out circuit requiring a minimum voltage (V), the further resistance (R_{fr}) being smaller than the minimum voltage (V) divided by the read current (I), (R_{fr}<V/I).

7. An electric device (100) as claimed in Claim 4, wherein the resistor is switchable between N different electrical resistance values, N being an integer larger than two, the electric device further comprising a read out circuit for determining the resistance value, the read out circuit being able to discriminate between two resistance values having a relative resistance difference larger than or equal to a minimum detectable relative resistance difference $(dR/R)_{min}$, a ratio ($k=R_{fr}/R_{cr}$) of the further resistance (R_{fr}) over a minimum resistance (R_{cr}) of the layer (7, 107) of the phase change material satisfying $k/[(1+k)(N-1)]>(dR/R)_{min}$.

8. An electric device (100) as claimed in claim 3, wherein the layer (7, 107) of phase change material and the further resistor (6, 106) have a contact resistance of 10^{-7} V cm^2/A or less, preferably 10^{-8} V cm^2/A or less, preferably 10^{-9} V cm^2/A or less.

9. An electric device (100) as claimed in claim 1, wherein the phase change material constitutes a conductive path between a first contact area (124) and a second contact area (132), a cross section of the conductive path being smaller than the first contact area and the second contact area.

10. An electric device (100) as claimed in Claim 5, wherein a part of the conductive path having the said cross section constitutes a volume of phase change material, the volume having an electrical resistance which is larger than an electrical contact resistance at the first contact area (124) and/or at the second contact area (132), irrespective of whether the phase change material is in the first phase or the second phase.

11. An electric device (100) as claimed in Claim 1, wherein the phase change material is a composition of formula $Sb_{1-c}M_c$ with c satisfying $0.05 \leq c \leq 0.61$, and M being one or more elements selected from the group of Ge, In, Ag, Ga, Te, Zn and Sn.

12. An electric device (100) as claimed in Claim 8, wherein c satisfies $0.05 \leq c \leq 0.5$, and preferably $0.10 \leq c \leq 0.5$.

13. An electric device (100) as claimed in Claim 1 or 11, wherein the phase change material is substantially free of Te.

14. An electric device (100) as claimed in Claim 1, wherein the resistor is comprised in a body (102), the resistor constitutes a memory element (170), and the body (102) further comprises:

an array of memory cells, each memory cell comprising a respective memory element (170) and a respective selection device (171), and

a grid of selection lines (120, 121),

each memory cell being individually accessible via the respective selection lines (120, 121) connected to the respective selection device (171).

15. An electric device (100) as claimed in Claim 14, wherein:

the selection device (171) comprises a metal oxide semiconductor field effect transistor having a source region (172), a drain region (173) and a gate region (174), and

the grid of selection lines (120, 121) comprises N first selection lines (120), M second selection lines (121), and an output line,

the resistor (107) of each memory element (170) electrically connecting a first region selected from the source region (172) and the drain region (173) of the corresponding metal oxide semiconductor field effect transistor to the output line, a second region of the corresponding metal oxide semiconductor field effect transistor, selected from the source region (172) and the drain region (173) and lying free from the first region, being electrically connected to one of the N first selection lines (120), the gate region (174) being electrically connected to one of the M second selection lines (121).